

AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 4, 6, 8 and 15 as shown below.

The following is a complete list of all claims in this application.

1. (Previously Presented) An activated carbon foam, comprising:
said activated carbon foam produced from particulate coal exhibiting a free swell index ranging from about 3.5 to about 5.0, wherein said activated carbon foam has a density ranging from 0.1 to about 0.8 g/cm³; and
wherein said activated foam has an overall surface area ranging from about 10 m²/g to about 25 m²/g.
2. (Previously Presented) The activated carbon foam of claim 1, wherein said overall surface area ranging from about 15 m²/g to about 20 m²/g.
3. (Previously Presented) The activated carbon foam of claim 1, wherein said particulate coal exhibits a free swell index ranging from about 3.75 to about 4.5.
4. (Currently Amended) The activated carbon foam of claim 3, wherein said overall surface area ~~ranging~~ ranges from about 15 m²/g to about 20 m²/g.
5. (Previously Presented) The activated carbon foam of claim 1, wherein said activated carbon foam is further calcined.
6. (Currently Amended) The activated carbon foam of claim 1, wherein said activated carbon foam is further graphitized.
7. (Previously Presented) A monolithic activated carbon filter element, comprising:
an activated carbon foam produced from particulate coal exhibiting a free swell index ranging from about 3.5 to about 5.0, wherein said activated carbon foam has a density ranging

from about 0.1 to about 0.8 g/cm³ and an overall surface area ranging from about 10 m²/g to about 25 m²/g.

8. (Currently Amended) The monolithic activated carbon filter element of claim 7, wherein said activated carbon ~~form~~ foam had an overall surface area ranging from about 15 m²/g to about 20 m²/g.

9. (Previously Presented) The monolithic activated carbon filter element of claim 7, wherein said particulate coal exhibits a free swell index ranging from about 3.75 to about 4.5.

10. (Previously Presented) The monolithic activated carbon filter element of claim 9, wherein said carbon foam has an overall surface area ranging from about 15 m²/g to about 20 m²/g.

11. (Previously Presented) The monolithic activated carbon filter element of claim 7, wherein said foam is further calcined.

12. (Previously Presented) The monolithic activated carbon filter element of claim 7, wherein said carbon foam is further graphitized.

13. (Previously Presented) A method of forming activated carbon foam, comprising:
heating swellable particulate coal in a mold to a first temperature ranging from about 300° C to about 700° C under a non-oxidizing atmosphere at a pressure ranging from about 25 psi to about 500 psi;

holding at the first temperature ranging from about 10 min. to about 12 hours;

controllably cooling heated swellable particulate after holding at said first temperature to a second temperature below about 100° C to form a carbon foam having a first overall surface area;

activating carbon foam by flowing an activation agent into the mold at a second temperature for increasing the first overall surface area ranging from about 10 m²/g to about 25 m²/g.

14. (Previously Presented) The method of forming activated carbon foam of claim 13, further comprising:

carbonizing the carbon foam having a first overall surface area to form a carbonized foam by heating to a second temperature ranging from about 600° C to about 1600° C in an inert atmosphere and holding at the second temperature for a period of time ranging from about 1 hour to about 3 hours.

15. (Currently Amended) The method of forming activated carbon foam of claim 14, further comprising:

graphitizing said carbonized foam by heating said carbonized foam to a fourth temperature ranging from about ~~1700~~ 1700° C to about 3000° C in an inert atmosphere and holding at the third temperature for a period of time greater than about 1 hour.

16. (Previously Presented) The method of forming activated carbon foam of claim 13, wherein said swellable particulate coal exhibits a free swell index ranging from about 3.75 to about 4.5.

17. (Previously Presented) The method of forming activated carbon foam of claim 13, wherein said activation agent includes carbon dioxide (CO₂).

18. (Previously Presented) The method of forming activated carbon foam of claim 13, wherein said activation agent includes ozone (O₃).